

REMARKS

The Office examined claims 1-20 and rejected same. With this paper, claims 1-6, 11-13, 15 and 16 are amended, none are canceled and none are added.

Claim Rejections under 35 USC §103

The Office rejected claims based on the following grounds:

Claims 1-6, 8 and 11-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sun (U.S. Patent No. 6,774,838, Sun hereinafter) in view of Gronemeyer (U.S. Pub. No. 2006/0195260, Gronemeyer hereinafter).

Claims 9-10 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sun in view of Gronemeyer and further in view of Haddrel (U.S. Pub. No. 2004/0209625).

Claim 7 is rejected under 35 U.S.C. §103(a) as being unpatentable over Sun in view of Gronemeyer further in view of Yoshioka (U.S. Publication No. 2001/0046884).

In the rejected claims, claims 1, 11, 15 and 16 are independent.

Regarding claim 1, the Office cites Sun for all of the features of claim 1 except "powering off selected components of the ranging receiver." The Office then asserts Gronemeyer for teaching powering off selected components of the ranging receiver.

With this paper, claim 1 is amended to add the following: "wherein the selected components of the ranging receiver is powered off if the sensor signals indicate the ranging receiver is stationary, and wherein the selected components of the ranging receiver is powered on if the sensor signals indicate the ranging receiver is in motion, or if a time since the powering off of the selected components of the ranging receiver has exceeded a predetermined time."

Applicant believes that the above underlined feature is neither disclosed in Sun nor in Gronemeyer.

In fact, the present invention is different from Sun in that only selected components of the ranging receiver (GPS receiver), not the entire ranging receiver, are turned off in the standby mode as opposed to a fully active mode or a fully powered off mode. Further, it is also different

from Sun in that the standby mode is not indefinite. Once the power-off exceeds a predetermined time limit, the selected components are reapplied with power to switch the ranging receiver back to the fully active mode, no matter whether there is a significant motion or not. Then, if there is no motion, the ranging receiver returns to the standby mode.

In Sun, once the GPS receiver is powered off due to the lack of motion, it would not be powered on again unless there is a motion detected by the motion sensor (see col. 2, line 65 to col. 3, line 6 and Fig. 2). This could be a problem, because during the power-off period there is no way to determine if the GPS receiver or the motion sensor is still in working order (the problem could be more pronounced in Sun since the power supply of the entire GPS receiver is turned off, not just a few selected components).

In the present invention, the power is reapplied to the selected components of the ranging receiver if: (a) a significant motion of the ranging receiver is detected, or (b) the power-off has exceeded a predetermined time period. If both the motion sensor and the GPS receiver indicate that there is no motion, the receiver can be turned off again for a next, longer predetermined time, and so on, for longer and longer time periods, preferably up to some maximum. The periodical power-on and power-off of the selected components of the ranging receiver, when there is no motion, provides a precaution against failure of the motion sensor (page 7, line 29 - page 8, line 9 of the present application). This procedure is also clearly depicted in Fig. 2 of the present application, where it is shown that reapplying the power to the selected components of the GPS receiver is according to one or another predetermined rule. These rules are explained on page 7, lines 23-29 of the present application. Therefore, the selected components of the ranging receiver is turned on and off not only by the motion, but also by itself in a timely manner. Neither Sun nor Gronemeyer teaches reapplying power after a predetermined time period.

Claim 1 is amended in order to further distinguish the present with Sun and Gronemeyer. It is believed that the above underlined limitation in the amended claim 1 is not obvious in view of the cited prior art. Applicant respectfully requests that rejection of claim 1 be reconsidered and withdrawn.

All other independent claims of the present application are also amended to incorporate the above patentable feature. Therefore, the rejection of these claims, and all dependent claims thereof, should also be withdrawn.

Conclusion

For all the foregoing reasons, it is believed that all of the claims of the application are allowable, and their passage to issue is earnestly solicited. The undersigned Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

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